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09/851,210	05/07/2001	Steven J. Harrington	D/98258	3224

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THOMPSON, JAMES A	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/851,210	Applicant(s) HARRINGTON, STEVEN J.	
	Examiner James A. Thompson	Art Unit 2625	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN
PRIMARY EXAMINER
Dtran

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 23 October 2007 have been fully considered but they are not persuasive.

Regarding page 6, line 2 to page 7, line 17: Applicant's remarks have been noted and fully considered. The presently recited claims are considered obvious over the prior art, as set forth in the arguments and prior art rejections below.

Regarding page 7, line 19 to page 8, line 18: Claim 1 recites, *inter alia*, "tessellating an available color space as defined by the YMCK inks and at least one additional color ink, by using vertices representing each YMCK and the at least one additional ink." In Hirokazu (US PGPub 2001/0028471 A1), the printing color space is defined by YMCK inks [see para. 21 of Hirokazu]. The YMCK color space is tessellated using vertices representing each YMCK, but which are determined according to corresponding L*a*b* points. While this tessellation is not done strictly according to a scheme in which the space is divided into blocks of size ΔY, ΔM, ΔC, and ΔK (where ΔY, ΔM, ΔC, and ΔK are the smallest divisions in the tessellation), the YMCK color space is still tessellated using vertices *representing* each YMCK. L*a*b* vertices can *represent* points in a YMCK color space owing to the mathematical relationship between the color spaces. The available color space is partitioned (and thus tessellated) into regions [see figure 2(61,62,63,64,65) of Hirokazu] based on lightness (L*) and color (a* and b*) values [see figure 2 and para. 43 of Hirokazu], which are derived directly from (and thus represent) YMCK inks [see para. 21, lines 1-5 of Hirokazu].

Gondek (USPN 5,982,990) is relied upon for its teachings with respect to using additional non-CMYK color inks in the color space, as set forth in the prior art rejections, both below and in the previous office action mailed 24 April 2007.

Regarding page 8, line 20 to page 9, line 17: Gondek has only been relied upon for its teachings regard using and printing with additional non-CMYK color inks as part of the overall defined color space. The motivation to combine Gondek with Hirokazu has been articulated in the prior art rejections, namely that the use of more redundant ink colors improves the resultant output of the printed hardcopy [see column 2, lines 25-39 of Gondek]. Such a simple modification would have been well within the ability of one of ordinary skill in the art at the time of the invention. Applicant's disclosure has not been relied upon at all in making such a combination. Thus, there has been no impermissible hindsight.

Applicant's other depictions of Gondek do not relate to the teachings Examiner relied upon in making the obviousness rejections. The remainder of Applicant's arguments in this section do not relate to the concept of impermissible hindsight, but rather to Applicant's allegation that all the elements are not taught. As already discussed above and articulated in the prior art rejections both below and in said previous office action, all elements of independent claims 1, 8 and 13 are taught by Hirokazu except for the limitations regarding the use of additional (non-CMYK) color inks, which is taught by Gondek.

Regarding page 9, lines 19-23: Since independent claims 1 and 13 have been shown to be obvious over the cited prior art reference, claims 6 and 16 cannot therefore be considered allowable merely due to their respective dependencies.

Conclusion: The presently recited claims are demonstrated to be obvious over the cited prior art references. Thus, the prior art rejections set forth in said previous office action are maintained and the present action is made final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-5 and 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirokazu (US Patent Application Publication 2001/0028471 A1) in view of Gondek (US Patent 5,982,990).**

Regarding claim 1: Hirokazu discloses receiving image data as input into a color printing system having YMCK inks (figure 1(Iin) and para. 21, lines 1-5 of Hirokazu); tessellating an available color space (figure 2 and para. 43 of Hirokazu) as defined by the YMCK inks (para. 21, lines 1-5 of Hirokazu), by using vertices representing points associated with each YMCK ink (figure 2; para. 22; and para. 43 of Hirokazu – *L*a*b* points each directly represent a corresponding point in the YMCK ink color space*), to divide the available color space into regions (figure 2(61,62,63,64,65) of Hirokazu) where the regions are arranged so as to minimize the range of luminance variation found within the regions (para. 42, lines 7-12 and para. 44, lines 1-7 of Hirokazu); and applying the resultant tessellated

available color space in the selection of the amounts of the RGB inks to the rendering of the image data (figure 1(Iout) and para. 20 of Hirokazu). The available color space is partitioned (and thus tessellated) into regions (figure 2(61,62,63,64,65) of Hirokazu) based on lightness (L*) and color (a* and b*) values (figure 2 and para. 43 of Hirokazu), which are derived directly from YMCK inks (para. 21, lines 1-5 of Hirokazu). Since the partitioned regions are arranged based on constant values of L* (and thus a variation of zero) (para. 42, lines 7-12 and para. 44, lines 1-7 of Hirokazu), the regions are therefore arranged so as to minimize the range of luminance variation found within the regions.

Hirokazu does not disclose expressly that said printing system also has at least one additional color ink; that said available color space is further defined by at least one additional color ink; that said vertices represent each YMCK and the at least one additional ink; and that said selection is performed based on YMCK inks and the at least one additional ink.

Gondek discloses defining an available color space that has at least one additional color ink apart from the standard color inks, and vertices in the color space represent each YMCK and the at least one additional ink (figure 1(20($L_c L_m$)); column 3, lines 45-50; and column 4, lines 58-60 of Gondek); and printing using YMCK inks and at least one additional ink (figure 1(18,20) and column 4, lines 45-57 of Gondek).

Hirokazu is analogous art since it is from the same field of endeavor as the present application, namely the tessellation and organization of a color space in a digital color image data reproduction system (figure 2 and figure 4 of Hirokazu). Hirokazu and Gondek are combinable because they are from the same field of endeavor, namely the control and processing of color ink spaces with redundant color inks for digital image data processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include additional color inks in the overall multi-dimensional color space, as taught by Gondek. Thus, said printing system would also have at least one additional color ink; said available color space would be further defined by at least one additional color ink; said vertices would represent each YMCK and the at least one additional ink; and said selection would also be performed based on the at least one additional ink. The motivation for doing so would have been that the use of more redundant ink colors improves the resultant output of the printed hardcopy (column 2, lines 25-39 of Gondek). Therefore, it would have been obvious to combine Gondek with Hirokazu to obtain the invention as specified in claim 1.

Regarding claim 2: Hirokazu discloses overlaying the tessellated color space result from the prior tessellating step with interpolation points so as to create an overlay lookup table (para. 28, lines 7-12 of Hirokazu).

Regarding claim 3: Hirokazu discloses applying image data to the overlay lookup table to point to which additional color inks to select (para. 35 of Hirokazu) and provide the amounts to use of the selected additional color inks (para. 34 of Hirokazu).

Regarding claim 4: Hirokazu discloses that the regions are arranged so that region boundaries are predominantly orthogonal to the axis of luminance (figure 2 and para. 42, lines 8-12 of Hirokazu). Since the regions are arranged purely with respect to increasing L* values (figure 2 and para. 42, lines 8-12 of Hirokazu), then the region boundaries are orthogonal to the axis of luminance.

Regarding claim 5: Hirokazu discloses that the amounts are interpolated from the interpolation points stored in the overlay lookup table (para. 28, lines 7-12 of Hirokazu).

Regarding claim 7: Hirokazu discloses that the regions are non-overlapping (figure 2 and para. 42, lines 8-12 of Hirokazu). Since the regions are each at separate, constant values of L* (figure 2 and para. 42, lines 8-12 of Hirokazu), the regions cannot overlap.

Regarding claim 8: Hirokazu discloses receiving image data as input into a color printing system having YMCK inks (figure 1(Iin) and para. 21, lines 1-5 of Hirokazu); tessellating into regions the given resultant color space (figure 2 and para. 43 of Hirokazu) so as to minimize luminance variation (para. 42, lines 7-12 and para. 44, lines 1-7 of Hirokazu) in the regions as defined by the YMCK color inks utilized (para. 21, lines 1-5 of Hirokazu); and applying the resultant tessellated available color space in the selection of the amounts of the RGB inks to the rendering of the image data (figure 1(Iout) and para. 20 of Hirokazu). The color space is partitioned (and thus tessellated) into regions (figure 2(61,62, 63,64,65) of Hirokazu) based on lightness (L*) and color (a* and b*) values (figure 2 and para. 43 of Hirokazu), which are derived from YMCK color inks (para. 21, lines 1-5 of Hirokazu). Since the partitioned regions are arranged based on constant values of L* (and thus a variation of zero) (para. 42, lines 7-12 and para. 44, lines 1-7 of Hirokazu), the regions are therefore arranged so as to minimize the luminance variation found within the regions. Furthermore, YMCK is a set of redundant color inks since, as is well known in the art, cyan, magenta and yellow (CMY) are of themselves sufficient to fully specify the color space. As is well-known in the art, black (K) is redundantly used in color ink printing so that a minimum amount of ink is placed on the print medium, and since black ink is cheaper than color ink.

Hirokazu does not disclose expressly that said printing system also has at least one additional color ink; that the resultant color space and the tessellated regions are defined by YMCK and additional color inks; and that said selection is performed based on YMCK inks and the at least one additional ink.

Gondek discloses defining an available color space that has at least one additional color ink apart from the standard (YMCK) color inks; defining regions that have at least one additional color ink apart

from the standard (YMCK) color inks (figure 1(20 (L_cL_m)); column 3, lines 45-50; and column 4, lines 58-60 of Gondek); vertices in the color space represent each YMCK and the at least one additional ink (figure 1(20(L_cL_m)); column 3, lines 45-50; and column 4, lines 58-60 of Gondek); and printing using YMCK inks and at least one additional ink (figure 1(18,20) and column 4, lines 45-57 of Gondek).

Hirokazu is analogous art since it is from the same field of endeavor as the present application, namely the tessellation and organization of a color space in a digital color image data reproduction system (figure 2 and figure 4 of Hirokazu). Hirokazu and Gondek are combinable because they are from the same field of endeavor, namely the control and processing of color ink spaces with redundant color inks for digital image data processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include additional color inks in the overall multi-dimensional color spaces and regions, as taught by Gondek. The motivation for doing so would have been that the use of more redundant ink colors improves the resultant output of the printed hardcopy (column 2, lines 25-39 of Gondek). Therefore, it would have been obvious to combine Gondek with Hirokazu to obtain the invention as specified in claim 8.

Regarding claim 9: Hirokazu discloses sorting the YMCK color inks by order of luminance from the darkest to the lightest (figure 2 and para. 42, lines 8-12 of Hirokazu). From right to left, the redundant color inks, which are converted into CIELab color space (para. 37-38 of Hirokazu), are sorted in order of luminance from the darkest ($L^* - 2\Delta L$) to the lightest ($L^* + 2\Delta L$) (figure 2 and para. 42, lines 8-12 of Hirokazu).

Hirokazu further discloses adding the YMCK color inks as points to the color space (figure 2 and para. 42, lines 8-12 of Hirokazu) and connecting the points in the sorted order so as to create tetrahedral tessellated regions (figure 2 and para. 42, lines 8-12 of Hirokazu).

By combination with Gondek, as set forth in the arguments regarding claim 8, the set of color inks is the YMCK and additional color inks.

Regarding claim 10: Hirokazu discloses that the regions are non-overlapping (figure 2 and para. 42, lines 8-12 of Hirokazu). Since the regions are each at separate, constant values of L* (figure 2 and para. 42, lines 8-12 of Hirokazu), the regions cannot overlap.

Regarding claim 11: Hirokazu discloses overlaying the tessellated color space with interpolation points so as to create an overlay lookup table (para. 28, lines 7-12 of Hirokazu).

Regarding claim 12: Hirokazu discloses applying image data to the overlay lookup table to point to which redundant color inks to select (para. 35 of Hirokazu) and provide the amounts to use of the selected redundant color inks (para. 34 of Hirokazu).

Regarding claim 13: Hirokazu discloses receiving image data as input into a redundant color printing system having YMCK inks (figure 1(Iin) and para. 21, lines 1-5 of Hirokazu); tessellating the given resultant color space into regions (figure 2 and para. 43 of Hirokazu) so as to minimize luminance variation (para. 42, lines 7-12 and para. 44, lines 1-7 of Hirokazu) in the regions (para. 21, lines 1-5 of Hirokazu), the regions delineated by vertices representing points associated with each YMCK ink (figure 2; para. 22; and para. 43 of Hirokazu – L*a*b* points each directly represent a corresponding point in the YMCK ink color space). The color space is partitioned (and thus tessellated) into regions (figure 2(61,62, 63,64,65) of Hirokazu) based on lightness (L*) and color (a* and b*) values (figure 2 and para. 43 of Hirokazu), which are derived from redundant color inks (CMYK) (para. 21, lines 1-5 of Hirokazu). Since the partitioned regions are arranged based on constant values of L* (and thus a variation of zero) (para. 42, lines 7-12 and para. 44, lines 1-7 of Hirokazu), the regions are therefore arranged so as to minimize the luminance variation found within the regions. Furthermore, YMCK is a set of redundant color inks since, as is well known in the art, yellow, magenta and cyan (YMC) are of themselves sufficient to fully specify the color space. As also is well-known in the art, black (K) is redundantly used in color ink printing so that a minimum amount of ink is placed on the print medium, and since black ink is cheaper than color ink.

Hirokazu further discloses that said tessellating is performed by sorting delineated vertices as defined by each YMCK ink by order of luminance from the darkest to the lightest (figure 2 and para. 42, lines 8-12 of Hirokazu). From right to left, the redundant color inks, which are converted into CIELab color space (para. 37-38 of Hirokazu), are sorted in order of luminance from the darkest ($L^* - 2\Delta L$) to the lightest ($L^* + 2\Delta L$) (figure 2 and para. 42, lines 8-12 of Hirokazu).

Hirokazu further discloses connecting the delineated vertices as defined by YMCK inks in the sorted order across the color space so as to create tetrahedral non-overlapping tessellated regions (figure 2 and para. 42, lines 8-12 of Hirokazu) with borders which are as much as possible predominantly orthogonal to the axis of luminance (figure 2 and para. 42, lines 8-12 of Hirokazu). The regions are defined by a constant L* value, a range of a* values, and a range of b* values, which form a four-sided region (such as figure 2(61) of Hirokazu), and thus a tetrahedron. Since the tetrahedral regions are each at separate, constant values of L* (figure 2 and para. 42, lines 8-12 of Hirokazu), the tetrahedral regions cannot overlap. Furthermore, since the regions are arranged purely with respect to increasing L* values (figure 2 and para. 42, lines 8-12 of Hirokazu), then the region boundaries are orthogonal to the axis of luminance.

Hirokazu further discloses applying the resultant tessellated color space regions in the selection of the amounts of the RGB inks to the rendering of the image data in the redundant color printing system (figure 1(Iout) and para. 20 of Hirokazu).

Hirokazu does not disclose expressly that said printing system also has at least one additional color ink; that said available color space is further defined by at least one additional color ink, and that said vertices represent and are defined by each YMCK and the at least one additional ink; and that said selection is performed based on YMCK inks and the at least one additional ink.

Gondek discloses defining a color space that has at least one additional color ink apart from the standard color inks, and vertices in the color space represent and are defined by each YMCK and the at least one additional ink (figure 1(20(L_cL_m)); column 3, lines 45-50; and column 4, lines 58-60 of Gondek); and printing using YMCK inks and at least one additional ink (figure 1(18,20) and column 4, lines 45-57 of Gondek).

Hirokazu is analogous art since it is from the same field of endeavor as the present application, namely the tessellation and organization of a color space in a digital color image data reproduction system (figure 2 and figure 4 of Hirokazu). Hirokazu and Gondek are combinable because they are from the same field of endeavor, namely the control and processing of color ink spaces with redundant color inks for digital image data processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include additional color inks in the overall multi-dimensional color space, as taught by Gondek. The motivation for doing so would have been that the use of more redundant ink colors improves the resultant output of the printed hardcopy (column 2, lines 25-39 of Gondek). Therefore, it would have been obvious to combine Gondek with Hirokazu to obtain the invention as specified in claim 13.

Regarding claim 14: Hirokazu discloses overlaying the tessellated color space with interpolation points so as to create an overlay lookup table (para. 28, lines 7-12 of Hirokazu).

Regarding claim 15: Hirokazu in view of Gondek discloses applying image data to the overlay lookup table to point to which YMCK inks and the at least one additional color ink (at least one additional color ink taught by Gondek) to select (para. 35 of Hirokazu) and provide the amounts to use of the selected YMCK inks and the at least one additional color ink (at least one additional color ink taught by Gondek) (para. 34 of Hirokazu).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirokazu (US Patent Application Publication 2001/0028471 A1) in view of Gondek (US Patent 5,982,990) and Ng (US Patent 5,185,661).

Regarding claim 6: Hirokazu in view of Gondek does not disclose expressly that the interpolation is performed by calculating the volume of tetrahedra formed by the interpolation points.

Ng discloses that interpolation is performed by calculating the volume of tetrahedra formed by the interpolation points (figure 4 and column 5, lines 16-24 of Ng).

Hirokazu in view of Gondek is combinable with Ng because they are from the same field of endeavor, namely color mapping and conversion of digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform interpolation by specifically calculating the volume of tetrahedra formed by the interpolation points, as taught by Ng. The suggestion for doing so would have been such interpolation based on the eight surrounding points and the associated volume is well-known (column 5, lines 19-22 of Ng), and thus readily applied and accurate. Therefore, it would have been obvious to combine Ng with Hirokazu in view of Gondek to obtain the invention as specified in claim 6.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirokazu (US Patent Application Publication 2001/0028471 A1) in view of Gondek (US Patent 5,982,990) and Kasson (US Patent 5,390,035).

Regarding claim 16: Hirokazu discloses compensating for the convexity or concavity of the tessellated regions (para. 35 of Hirokazu).

Hirokazu in view of Gondek does not disclose expressly that, if creating a tetrahedral non-overlapping tessellated region results in a concave shape, then additional tetrahedral non-overlapping tessellated regions are added to fill the cavity and maintain a convex construction.

Kasson discloses that, if creating a tetrahedral non-over-lapping tessellated region results in a concave shape, then additional tetrahedral non-overlapping tessellated regions are added to fill the cavity and maintain a convex construction (figure 7 and column 14, lines 3-9 of Kasson). The tetrahedra are generated using a volume packing technique which minimizes distortion of the domain space (column 14, lines 3-6 of Kasson). Figure 7 of Kasson shows that an overall convex shape is maintained for the domain space. Further, since the domain space is packed with octahedra that are in turn packed with tetrahedra (column 14, lines 6-9 of Kasson), then a convex shape will inherently be maintained owing to the convex shape of an octahedron.

Hirokazu in view of Gondek is combinable with Kasson because they are from the same field of endeavor, namely the tessellation and organization of a color space in a digital color image data reproduction system. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include additional tetrahedral non-overlapping tessellated regions to maintain a convex construction, as taught by Kasson. The motivation for doing so would have been minimize the distortion of the domain space (column 14, lines 3-6 of Kasson). Therefore, it would have been obvious to combine Kasson with Hirokazu in view of Gondek to obtain the invention as specified in claim 16.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James A. Thompson
Examiner
Technology Division 2625

26 December 2007

DOUGLAS Q. TRAN
PRIMARY EXAMINER